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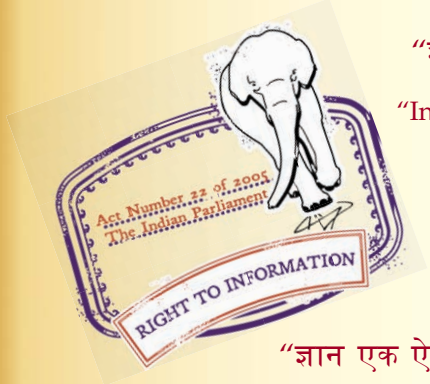
IS 5009 (1968): Buchner Funnels [CHD 10: Glassware]



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IS 5009 : 1968
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Indian Standard

SPECIFICATION FOR BUCHNER FUNNELS

UDC 542.232.6 : 66.067.31

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

***April* 1949**

AMENDMENT NO. 1 MARCH 1973

TO

IS:5009-1968 SPECIFICATION FOR BUCHNER FUNNELS

Addendum

[*Page* 5, *Table* 1, *Sl No.* (iv)] — Add the following matter under the respective columns after Sl No. (iv) and change the subsequent items accordingly:

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
v)	125	130	113	1.5	55	700	25	90

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SPECIFICATION FOR BUCHNER FUNNELS

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Indian Standard

SPECIFICATION FOR BUCHNER FUNNELS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 30 November 1968, after the draft standard finalized by the Ceramicware Sectional Committee had been approved by the Chemical Division Council.

0.2 Porcelain Buchner funnels are used in laboratories to quickly filter hot solutions with water as solvent usually. Hot and concentrated alkaline or acid solutions should not be filtered through Buchner funnels. The inside diameters of the funnels have been so chosen as to match the popular sizes of the filter papers.

0.3 In the formulation of this standard, due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in this country. This has been met by deriving assistance from DIN 12905 "Buchner's suction filters" issued by the Deutscher Normenausschuss.

0.4 This standard has clauses **3.5** and **5.1** which provide for agreement between the purchaser and the supplier.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements and the methods of sampling and test for Buchner funnels made of porcelain and used for analytical purposes.

*Rules for rounding off numerical values (*revised*).

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in IS : 2781-1964* shall apply.

3. REQUIREMENTS

3.1 Material and Manufacture — Buchner funnels shall be made of porcelain of suitable chemical and thermal properties, and shall be thoroughly vitrified.

3.2 Shape — The funnels shall have the shape as shown in the figure in Table 1.

3.3 Dimensions — The funnels shall conform to the dimensions given in Table 1.

3.3.1 *Tolerance* — shall be ±5 percent on all dimensions.

3.3.2 Perforations in the filter plate shall be arranged in the pattern shown in figure in Table 1. Total area of perforations shall be between 5 and 10 percent of the area of the filter plate.

3.4 Glaze and Porosity — Buchner funnels shall be glazed, except for the portions where they are supported for firing. The unglazed edges or points shall have a smooth finish.

3.4.1 When tested in accordance with the method prescribed in **5** of IS : 2836-1964†, the funnels shall not show any cracks, pinholes, crazing and peeling defects, and also any stain on the glazed surface or the crcepagc of any stain between the glaze and the body or both.

3.5 Resistance to Acid (Optional) — When agreed to between the purchaser and the supplier, the funnels shall be tested for resistance to acid in accordance with the method prescribed in **10** of IS : 2836-1964†. The limit for resistance to attack by acid shall be as agreed to between the purchaser and the supplier.

4. MARKING

4.1 The funnels shall be indelibly marked under the glaze, near the outside rim with the following:

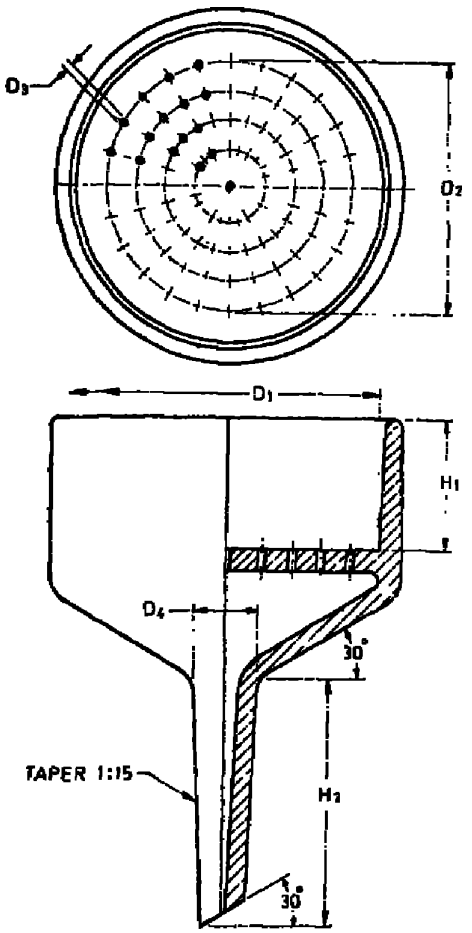
a) Designation, and

b) Trade-mark of the manufacturer, if any.

*Glossary of terms relating to ceramicware.
†Methods of test for laboratory porcelain.

TABLE 1 DIMENSIONS OF BUCHNER FUNNELS

(Clauses 3.2 *and* 3.3)



BUCHNER FUNNEL

SL No.	*DESIGNATION*	*FILTER PLATE*			*FILTER SPACE*		STEM	
		D_1	D_2	D_3 (Optional)	H_1	Nominal Capacity	D_4	H_4
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		mm	mm	mm	mm	ml	mm	mm
i)	45	48	39	1.5	25	45	13	55
ii)	70	75	61	1.5	35	150	20	70
iii)	80	05	80	1.5	40	280	20	75
iv)	110	115	100	1.5	50	500	25	So
v)	150	156	137	2	60	1 100	30	100
vi)	240	248	225	2	90	4 300	40	120
vii)	320	330	302	2	120	10 000	55	145

4.1.1 The funnels may also be marked with the ISI Certification mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

5. PACKING

5.1 The funnels shall be suitably packed in wooden cases or cardboard boxes as agreed to between the purchaser and the supplier.

6. SAMPLING

6.1 Representative samples of Buchner funnels shall be drawn and their criteria for conformity shall be adjudged as prescribed in Appendix A.

APPENDIX A

(*Clause* 6.1)

SAMPLING OF BUCHNER FUNNELS

A-1. SCALE OF SAMPLING

A-1.1 Lot — All Buchner funnels of the same designation, produced under essentially similar conditions of manufacture and offered for inspection at the same time, shall be grouped together to constitute a lot.

A-1.2 The conformity of the lot to the requirements of this specification shall be ascertained separately for each individual lot. For this purpose, samples shall be taken in accordance with col 1 and 2 of Table 2.

A-1.3 The samples shall be selected at random from the lot. To ensure randomness of selection, use shall be made of random number tables. In case such a table is not available, the following procedure shall be used:

Starting from any article in the lot count them as 1, 2, 3, ..., etc up to *r* and so on, where *r* is the integral part of *N/n* (*see* col 1 and 2 of Table 2). Every *r*th article thus counted shall be withdrawn to constitute the sample.

TABLE 2 NUMBER OF SAMPLES FOR TESTING

(*Clauses* A-1.2 *and* A-1.3)

NO. OF ARTICLES IN THE LOT *N*	No. OF ARTICLES IN THE SAMPLE *n*	PERMISSIBLE NO. OF DETECTIVES IN SHAPE AND DIMENSION	No. OF ARTICLES TO BE TESTED TOR 3.4 AND 3.5
(1)	(2)	(3)	(4)
Up to 50	8	0	1
51 „ 100	13	1	2
101 „ 500	30	2	3
501 „ 3 000	32	3	5
3 001 and above	50	5	8

A-2. NUMBER OF TESTS AND CRITERIA FOR CONFORMITY

A-2.1 Each of the articles in the sample as selected in **A-1.3** shall be inspected for requirements **3.1** to **3.3**. An article failing to meet any of these requirements shall be a defective article. The number of defective articles in the sample shall not exceed the permissible number of defectives given in col 3 of Table 2, otherwise the lot shall be considered as not conforming to the requirements.

A-2.2 Test for the requirements in **3.4** and **3.5** shall be conducted on a number of articles as given in col **4** of Table 2 which shall be selected at random from the sample obtained in **A-1.3.** A fresh set of articles shall be used for each test. The Lot shall be considered as conforming to these requirements if none of the articles fails in any of the tests.

INDIAN STANDARDS

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